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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/813,111      | 03/31/2004  | Hui-Lung Kuo         | BHT-3111-446        | 5541             |

7590 07/25/2005

BRUCE H. TROXELL  
SUITE 1404  
5205 LEESBURG PIKE  
FALLS CHURCH, VA 22041

EXAMINER

NGUYEN, THONG Q

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2872

DATE MAILED: 07/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/813,111             | KUO ET AL.          |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Thong Q. Nguyen        | 2872                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 6/13/2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 13 is/are pending in the application.
- 4a) Of the above claim(s) 8-12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-7 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of Species (I) in the reply filed on June 13, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

As a result of applicant's election, claims 1-7 and 13 are examined in this Office action, and claims 8-12 have been withdrawn from further consideration as being directed to non-elected species.

2. This application is in condition for allowance except for the presence of claims 8-12 to a species non-elected in the reply filed on June 13, 2005. A complete reply to this rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

***Priority***

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate

paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

5. The drawings contained fourteen sheets of figures 1-11 were received on 3/31/2004. These drawings are objected by the Examiner for the following reason(s).

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: The references "122a", "1211a" and "1221a" appeared in each of figures 6 and 6A and the references "122c", "1211c" and "1221c" appeared in each of figures 10 and 10A are not mentioned in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

7. The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).
8. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

9. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
10. The disclosure is objected to because of the following informalities: a) Page 2: line 12, "concave" should be changed to --convex--. Applicant should note that the

concave-shaped depression is appeared on the convex element 44 (see line 10 of page 2 and figure 2); b) Page 7: line 11, "11a" should be changed to --11--; c) Page 7: line 27, "10bb" should be changed to --10b-- and on each of lines 28 and 30 , "11" should be changed to --11b-- ; d) 10: line 8, "10c" should be changed to --10b--. There are still some grammatical and idiomatic errors in the specification. Applicant should carefully proofread the specification. Appropriate correction is required.

11. The specification is also objected to because of the following informalities.  
Appropriate correction or an explanation is required.

In the specification in pages 5 and 8-9, the specification discloses that the ridge-shaped surface of the concave diffusing piece has a plurality of concave ridges wherein there is a ridgeline defined between two adjacent concave ridges. The specification in the mentioned pages discloses that the ridge height of the concave ridge is defined as the difference of altitude between the ridgeline and the line separating the large ridge and the small ridge. See page 5, lines 25-27 and page 8, lines 32-33. Such description is unclear with regard to the structure of the concave diffusing piece as disclosed in the specification and shown in figures 4-6 and 8-9. The Examiner is of opinion that the concave diffusing piece as taught by the specification is a concave diffusing piece having a plurality of concave ridges which are of the same size. As such, the definition for the ridge height as described in page 5, lines 25-27 and page 8, lines 32-33 is incorrect. Should "the line separating the large ridge and the small ridge" appeared in page 5, line 27 and which is appeared in page 8, line 33 be changed to

--the bottom line (or the center line or the valley) of the concave ridge-- or other suitable technical terms to make the teachings related to the structure of the concave diffusing piece consistence. Appropriate correction or an explanation is required.

### ***Claim Objections***

12. Claims 1-7 and 13 are objected to because of the following informalities.

Appropriate correction is required.

- a) In claim 1: on each of lines 2, 8, 14 and 15, the term "ridge-shape" should be changed to --ridge-shaped--.
- b) Claim 5 is objected to because the specification has not disclosed that the plurality of concave ridges of the concave diffusing piece has different sizes so that the ridge of the ridge is defined as the difference of altitude between the ridgeline and the line separating the large ridge and the small ridge. Such recitation related to the ridge height in the claim does not have supported or disclosed in the specification. Applicant should note that the specification and the drawings, in particular, figures 4-6 and 8-9 disclose that the concave diffusing piece as taught by the specification is a concave diffusing piece having a plurality of concave ridges which are of the same size. As such, the definition for the ridge height as claimed is incorrect. Should "the line separating the large ridge and the small ridge" (lines 4-5) be changed to --the bottom line (or the center line or the valley) of the concave ridge--or other suitable technical terms to make the claim comply with the requirement of 35 USC 112, second paragraph.

- c) In claim 7: the recitation thereof "a diffusion layer...thin transparent layer" (lines 3-6) is unclear due to the reference to the direction of the rugged external surface of the diffusion layer. It is noted that the specification has not disclosed that the rugged surface of the diffusion layer faced toward the ridge layer as claimed. Applicant should note that the rugged surface of the diffuser (13b or 23b) faces toward the transparent substrate (11b or 21b) when the diffusion layer is sandwiched between the ridge-shaped layer and the substrate. Should the terms thereof "facing toward the ridge-shape layer" (lines 4-5) be deleted to make the structure of the device claimed consistent to that disclosed in the specification?
- d) Claim 13 is objected for the same reason as set forth in element c) above. Should the terms thereof "facing toward the ridge-shape layer" (line 4) be deleted to make the structure of the device claimed consistent to that disclosed in the specification?
- e) The remaining claims are dependent upon the objected base claim and thus inherit the deficiency thereof.

***Allowable Subject Matter***

13. Claims 1-7 and 13 would be allowable if rewritten or amended to overcome the objections as set forth in this Office action.
14. The following is a statement of reasons for the indication of allowable subject matter:



The high brightness diffuser as recited in the present independent claim 1 is patentable with respect to the cited art, in particular, the U.S. Patent Nos. 6,081,380; 5,995,288; 5,598,280; 3,791,712 and 6,222,689 by the limitations related to the formation of the diffuser. It is noted that the use of a diffuser having two light diffusing pieces arranged in a close relationship or plastered to each other is known to one skilled in the art as can be seen in each of the mentioned Patents. While the art disclose an arrangement of two convex diffusing pieces or two concave diffusing pieces (see Patents '712; '280 and '288) or a concave diffusing piece and a convex diffusing piece (see Patent '380); however, the art does not disclose *an arrangement of a convex diffusing piece having a ridge-shaped surface formed by a plurality of large and small convex ridges arranged in an interlaced manner and a concave diffusing piece having a ridge-shaped surface formed by a plurality of concave ridges wherein the ridge-shaped surface of the convex diffusing piece is plastered on the surface without ridge-shaped surface of the concave diffusing piece as claimed.*

### **Conclusion**

15. This application is in condition for allowance except for the following formal matters:

See the objections to the specification, the drawings and the claims as set forth in this Office action.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

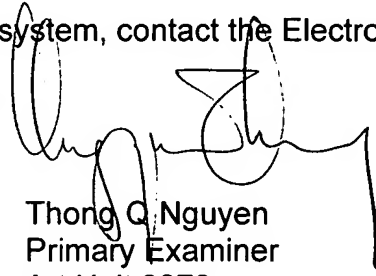
Art Unit: 2872

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Nguyen  
Primary Examiner  
Art Unit 2872

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